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**PACIFIC**  **TELESIS**  
Group - Washington

EX PARTE OR LATE FILED

February 3, 1997

**EX PARTE**

William F. Caton  
Acting Secretary  
Federal Communications Commission  
Mail Stop 1170  
1919 M Street, N.W., Room 222  
Washington, D.C. 20554

Dear Mr. Caton:

Re: CC Docket No. 95-116, Telephone Number Portability

Enclosed please find a letter to Gina Keeney on the subject of Query on Release that we wish to file in the above docket. Please associate this material with the above referenced proceeding.

We are submitting two copies of this notice in accordance with Section 1.1206(a)(1) of the Commission's Rules.

Please stamp and return the provided copy to confirm your receipt. Please contact me should you have any questions or require additional information concerning this matter.

Sincerely,

*Alan Ciamporcero*

Attachment

cc: Richard Metzger  
Carol Matthey  
Jeannie Su  
Susan McMaster

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February 3, 1997

Regina Keeney  
Chief, Common Carrier Bureau  
Federal Communications Commission  
1919 M Street, N.W.  
Room 500  
Washington, DC 20554

Re: *Telephone Number Portability* CC Docket No. 95-116

Dear Ms. Keeney:

Two weeks ago, the Chief Engineers from Bell Atlantic and Pacific Bell (John Seasholtz and Ross Ireland) met with you to discuss the importance of Query on Release (QoR), as a technology to be used in our networks for number portability. In the course of that meeting, some questions arose relating to the cost differences between LRN and QoR that we would like to explain in more detail.

We submitted to the FCC our cost study documenting the difference in costs between QoR and LRN. One of our assumptions was that our network would need to be engineered to handle unqueried calls sent to us (default routed) from interexchange carriers. Default routing can occur in one of two ways: one, during the transition to LNP capability in each MSAs, or two, due to a failure in another network. For the latter scenario, we assumed that we would need to have the capacity to process 60% of the interLATA calls, which would correspond to the amount of traffic currently handled by AT&T. Thus, in the event of an outage in AT&T's network, our network could handle the unqueried calls that would be sent to us from the largest IXC.

AT&T and MCI have challenged this assumption, claiming that it artificially increases the cost savings resulting from QoR. This is absolutely false.

It is reasonable to include costs to perform default routing. It is a reasonable assumption for us to include this traffic in estimating costs and engineering our network for two reasons. First, the Commission's Number Portability Order applies to LECs only (see 47 C.F.R. 52.3). IXCs are not bound to the order. While certain large IXCs have indicated in various forums that they will perform queries prior to delivering calls to our network,

timing issues remain which make it prudent to engineer our network to include these types of costs.<sup>1</sup> Unless the IXC's have their network 100% converted to local number portability prior to the time we begin to convert our offices in each MSA, then the IXC's will be sending unqueried calls to us, and we will need to perform queries on their behalf. For example, in the Los Angeles MSA, we plan on converting offices between October 1, 1997 and December 31, 1997. If AT&T does not convert its network to be LNP capable until December 30, 1997, then for almost 90 days, we will need to query AT&T's calls for them on a default routing basis.

Second, it is prudent to include these costs in our cost estimate since the redundancy offered by default routing is an integral part of the LRN (and QoR) call models. AT&T has explained "In this NRA/LRN architecture, Default Routing will be applied if the NP-SCP cannot be accessed due to abnormal circumstances. If the default routing feature is assigned, then when the SCP is unavailable, or the SCP response has a fatal error, the call be routed as if a CONTINUE message was received from the SCP."<sup>2</sup> Similarly, AT&T has described the Default Routing Mechanism: "Calls where the appropriate carrier cannot or does not query are dipped by the terminating LSP [local service provider] to which the NPA-NXX is assigned on a default basis."<sup>3</sup> Thus, AT&T advocates that default routing be part of the LNP capability. It is therefore appropriate that we include costs which permit this capability to occur.

However, the cost savings we realize when omitting default routing traffic volumes is not proportional to the overall costs. The relationship between cost differences and needed equipment and facilities is non-linear, but rather is step-function. For example, one of the big drivers of LRN costs is the number of ISCPs needed to handle the volumes. ISCPs are in turn determined by the number of links. For example if ISCPs are only able to handle 5 links, then if 6 links are needed, 2 ISCPs must be deployed. Therefore, small changes in traffic can drive significant network costs or savings disproportionately.

Moreover, even if we estimate the cost differences between QoR and LRN without including the costs associated with default routing for the carriers, QoR still remains a compelling choice. Default routing requires us to engineer our network to handle failures in other networks. *This is true for both the LRN and QoR call models.* Thus, removing default routing costs from the cost showing we have already submitted, which is for the difference in cost between LRN and QoR, alters the conclusion from a \$106-\$130M cost difference to a \$106-\$112 difference. In either case, cost savings are substantial. The reason that the low number does not change is due to the non-linear relationship between links and the number of required ISCPs. A traffic reduction does not necessarily correspond to a lower level of network investment because, using the example above, if the number of links required drops from 7 to 6, no corresponding decrease in number of

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<sup>1</sup> Pacific raised this issue/concern in its Petition for Reconsideration filed August 26, 1996.

<sup>2</sup> Response 5.D of AT&T to the California PUC Task Force LNP Framework.

<sup>3</sup> AT&T presentation to the Maryland LNP Consortium, October 24, 1995.

ISCPs occurs. We have attached to this letter our matrices reflecting costs savings even if we do not include network capacity for IEC queries.<sup>4</sup>

What is clear, nonetheless, is that even though the difference in costs between LRN and QoR does not appreciably change when these traffic volumes are excluded, our total costs of deploying number portability significantly increases. In either case, we need to engineer our network to handle additional traffic loads, which drives costs up. We therefore have a significant interest in resolving the default routing issue so that we know whether or not we have the responsibility to complete unqueried calls sent to our network from a query-capable carrier.

Therefore, it is appropriate that we included the traffic volumes our network would experience in a default routing scenario, which could include a failure in the largest IXC network. Moreover, even excluding these volumes, does not drive a significantly different cost savings between LRN and QoR. Our analysis indicates that we will save in the neighborhood of \$106M to \$112M even if these volumes are not included.

Please give us a call if you have any questions or would like to discuss this matter in more detail.

*Alan Thompson For NCW*

Nancy C. Woolf  
Senior Counsel

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<sup>4</sup> We refer you back to our October 29, 1996 *ex parte* for our assumptions and methodology.

# Cost Model Projection of QoR Savings - Removing Network Capacity for IEC Queries

## 30% Calls to Ported Numbers & 15% Processor Growth (\$M)

LRN	1997	1998	1999	2000	2001	Total
Switch Upgrades	\$25.8	\$8.6	\$27.9	\$18.6	\$27.9	\$108.8
Signaling Network Upgrades	\$26.6	\$13.0	\$0.0	\$0.0	\$0.0	\$39.6
Software RTU Fee	\$56.1	\$0.0	\$0.0	\$0.0	\$0.0	\$56.1
<b>Total Purchase Cost</b>	<b>\$108.5</b>	<b>\$21.6</b>	<b>\$27.9</b>	<b>\$18.6</b>	<b>\$27.9</b>	<b>\$204.5</b>
Installation & Support Costs	\$45.0	\$10.3	\$13.3	\$8.9	\$13.3	\$90.7
<b>LNP Cost</b>	<b>\$153.5</b>	<b>\$31.9</b>	<b>\$41.2</b>	<b>\$27.5</b>	<b>\$41.2</b>	<b>\$295.2</b>

QoR	1997	1998	1999	2000	2001	Total
Switch Upgrades	\$0.2	\$0.3	\$19.1	\$7.1	\$13.4	\$40.1
Signaling Network Upgrades	\$3.3	\$0.2	\$3.3	\$3.1	\$3.3	\$13.2
Software RTU Fee	\$76.8	\$0.0	\$0.0	\$0.0	\$0.0	\$76.8
<b>Total Purchase Cost</b>	<b>\$80.3</b>	<b>\$0.5</b>	<b>\$22.4</b>	<b>\$10.2</b>	<b>\$16.7</b>	<b>\$130.1</b>
Installation Costs	\$28.7	\$0.2	\$8.0	\$3.7	\$6.0	\$46.6
Support Equipment Costs	\$0.4	\$0.1	\$2.7	\$1.2	\$2.0	\$6.4
Installation & Support Costs	\$29.1	\$0.3	\$10.7	\$4.9	\$8.0	\$53.0
<b>LNP Cost</b>	<b>\$109.4</b>	<b>\$0.8</b>	<b>\$33.1</b>	<b>\$15.1</b>	<b>\$24.7</b>	<b>\$183.1</b>

Yearly Savings	\$44.1	\$31.1	\$8.1	\$12.4	\$16.5	<b>5 Year Savings</b>
Cumulative Savings	\$44.1	\$75.2	\$83.3	\$95.7	\$112.1	

% of Total Savings	39.4%	67.1%	74.3%	85.3%	100.0%
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**Estimate does not include common implementation costs**

# Cost Model Projection of QoR Savings - Removing Network Capacity for IEC Queries

**40% Calls to Ported Numbers & 5% Processor Growth  
(\$M)**

<b>LRN</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>Total</b>
Switch Upgrades	\$25.8	\$8.6	\$0.0	\$21.7	\$18.6	\$74.7
Signaling Network Upgrades	\$26.6	\$13.0	\$0.0	\$0.0	\$0.0	\$39.6
Software RTU Fee	\$56.1	\$0.0	\$0.0	\$0.0	\$0.0	\$56.1
<b>Total Purchase Cost</b>	<b>\$108.5</b>	<b>\$21.6</b>	<b>\$0.0</b>	<b>\$21.7</b>	<b>\$18.6</b>	<b>\$170.4</b>
Support Equipment Costs	\$45.0	\$10.3	\$0.0	\$10.3	\$8.9	\$74.5
<b>LNP Cost</b>	<b>\$153.5</b>	<b>\$31.9</b>	<b>\$0.0</b>	<b>\$32.0</b>	<b>\$27.5</b>	<b>\$244.9</b>

<b>QoR</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>Total</b>
Switch Upgrades	\$0.2	\$0.3	\$0.7	\$7.2	\$1.5	\$9.9
Signaling Network Upgrades	\$3.3	\$0.2	\$3.3	\$3.3	\$3.4	\$13.5
Software RTU Fee	\$76.8	\$0.0	\$0.0	\$0.0	\$0.0	\$76.8
<b>Total Purchase Cost</b>	<b>\$80.3</b>	<b>\$0.5</b>	<b>\$4.0</b>	<b>\$10.5</b>	<b>\$4.9</b>	<b>\$100.2</b>
Support Equipment Costs	\$29.2	\$0.2	\$1.9	\$5.0	\$2.3	\$38.6
<b>LNP Cost</b>	<b>\$109.5</b>	<b>\$0.7</b>	<b>\$5.9</b>	<b>\$15.5</b>	<b>\$7.2</b>	<b>\$138.8</b>

<b>Yearly Savings</b>	<b>\$44.1</b>	<b>\$31.1</b>	<b>(\$5.9)</b>	<b>\$16.5</b>	<b>\$20.2</b>	<b>5 Year Savings</b>
<b>Cumulative Savings</b>	<b>\$44.1</b>	<b>\$75.2</b>	<b>\$69.3</b>	<b>\$85.8</b>	<b>\$106.1</b>	<b>\$106.1</b>

<b>% of Total Savings</b>	<b>41.6%</b>	<b>70.9%</b>	<b>65.3%</b>	<b>80.9%</b>	<b>100.0%</b>	
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**Estimate does not include common implementation costs**